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ABSTRACT

The Los Angeles Community College District Office of Research and Analysis has defined and mapped service areas for eght of the district's colleges on the basis of fall 1974 enrollment patterns. This report contains demographic summary data on the students and population as a whole living within each service area, thus allowing a profile of both students and community in each of the eight areas. Section I of the report describes the methods used to define college service areas, and discusses the technical tools involved. Section II presents the summarized student and population demographic data in a series of maps, tables, and graphs. Practical applications for users are discussed where appropriate. A brief list of references is included in the report. (JDS)

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LOS ANGELES COMMUNITY COLLEGE DISTRICT

PROFILES OF DISTRICT AND
COLLEGE SERVICE AREAS

Research Report 76-05

VOLUME I

(Summary Report)

by

Arthur N. Cherdack
Robert M. Alworth

DIVISION OF EDUCATIONAL PLANNING AND DEVELOPMENT

Office of Educational Research and Analysis

August 1976

JC 760 444

INTRODUCTION

The Los Angeles Community College District's Office of Educational Research and Analysis and its Data Base Team have since 1973 been developing procedures for analyzing and reporting geographically distributed information. These procedures have been referred to as "Geosystems."

This report - the first volume of a two-volume set - defines and maps service areas for eight of the District's colleges on the basis of Fall 1974 enrollment patterns. Volume I also contains demographic summary data regarding the students and the population as a whole living within each service area, thus allowing a profile of both students and community. Volume II contains population and student data for individual census tracts within each service area.

The information contained in these reports can be useful to college and District planners who seek understanding and insight into the diverse populations included within our District boundaries.

Section I of Volume I provides a brief background to the Geosystems project, describes the method used to define college service areas, and discusses the technical tools involved.

Section II presents the summarized student and population demographic data in maps, tables and graphs. Practical applications for users are discussed where appropriate.

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SECTION I

Background

In 1973, members of the District Research Council and the Office of Educational Research and Analysis initiated a joint project geared at developing a geographically-based information system. The plan was to build a District-wide data base that could be used in studying the geographical distribution of student residence locations. A further desire was to provide data by which the demographic characteristics of students and their communities could be studied for planning purposes. A Community College Data Base Team was formed under the supervision of the Office of Educational Research and Analysis. The first product of that effort (1)* was the publication of a report containing (a) a listing of all census tracts within Los Angeles County, (b) a count of the number of Fall 1972 students applying to each college by census tract, (c) selected population characteristics by census tracts, and (d) computer maps of selected demographic data.

A second report in 1974 (2) provided (a) a count of Fall 1973 students enrolled at each college by census tract, (b) a quartile distribution of the students enrolled at each college by census tract, showing the importance of each tract to a given college, (c) additional demographic community information by census tract, (d) selected student information by census tract, and (f) computer maps showing areas being serviced by each college.

Technical Research Tools

In order to provide these data it was necessary to establish several technical tools at the District Computer Center. These tools were: (a) Los Angeles County's ACG/DIME file, (b) ADMATCH, the Census Bureau's address matching computer program (c) SYMAP, a computer mapping program developed by Harvard University, and (d) an abstract of the fourth count 1970 census summary tapes.

*Numbers in parentheses indicate References on page 26.

The ACG/DIME file is a computerized reference file listing the census tract (and other geographical codes) that accompany any given street address. This reference file is matched against records in the student file via the ADMATCH program. ADMATCH obtains the correct census tract for each address in the student file and appends that census tract to the student's record. This process allows the planner to determine the number of students residing in each surrounding census tract. If desired, the SYMAP program can be used to print a computer-generated map displaying this enrollment information. (No SYMAP maps are contained in the current publication.)

Further descriptions of Geosystems methodology and use are contained in references (3) - (6).

Methodology Used in Defining the Basic College Service Areas

The Los Angeles Community College District serves a geographical area of 882 square miles and approximately four million people. The District is larger than the City of Los Angeles but smaller than the County of Los Angeles. Citizens residing within the District are free to attend any one of its colleges regardless of their residence location.

In defining service areas it was anticipated that each college would want to compare itself to others within the District in terms of its community and student characteristics. Therefore, the method used to define service areas needed to provide an accurate and independent picture for each college.

To accomplish this task, the census tracts contributing students to a given college were ranked from highest to lowest according to the number of students contributed to that college. The list of tracts was then divided into quartiles: those

tracts contributing the first 25% of the college's enrollment comprised the first quartile, those contributing the second 25% comprised the second quartile, and so on. The first quartile, since it contained a college's heavy draw areas, generally contained fewer tracts than the second quartile, which in turn contained fewer tracts than the third, etc. The first three quartiles--those tracts contributing 75% of the college's enrollment--may be termed the college's (de facto) basic service area. The fourth quartile tracts are excluded from the basic service area because of the large number of tracts involved.

The above process was performed separately for each college. As a result, some census tracts were included in more than one basic service area, while other tracts were included in no service area. Table 1 in Volume II contains the tabular data used in defining basic service areas for each college.

The reader will note that college service areas are defined here as the area a college is actually serving at a given point in time rather than the area it should be serving. It is recognized that it is not within the realm of administrative reality to define a college's basic service area by statistical means alone. However, it is believed that the procedures described in this paper are workable ones that can significantly assist college planning efforts.

SECTION II

The following is a description of the data presented in the remainder of Volume 1; a discussion is provided where appropriate as to how these data can be used by college planners.

College Service Area Maps

Figures 1 - 8 present maps of each college's basic service area as defined in Section 1 of this report. These maps depict in black those census tracts contributing 75% of the college's enrollment in Fall 1974. Outlying black areas typically represent Outreach classes or other special educational efforts. The unusually scattered configuration of Trade-Tech's service area reflects the unique and specialized nature of its curriculum.

College Service Area Population Characteristics

Table 1 presents selected demographic characteristics of the population living within each college service area and within the District as a whole. Figures 9 - 11 graph these same characteristics. Data were abstracted from 1970 fourth count census information stored in the District computer. Data elements include percent white, black, Spanish-surnamed, Asian, and other; percent white collar, blue collar, farm, service, and employed; and median age, education, and income.

Volume II contains detailed population characteristics for each census tract within the various service areas.

It is hoped that this information will prove helpful to District and college personnel desiring to learn more about the diverse nature and demography of the District population. It will also be of use in studying selected regions outside the normal service areas and in compiling background information for grant applications.

College Service Area Student Characteristics

Table 2 presents selected demographic characteristics of students residing within each college service area. Figures 12 - 14 graph these same characteristics. Student data were obtained from the Fall 1974 student record file and related to service areas using the methodology described in Section 1. Data elements include percent white, black, Spanish-surnamed, Asian, and other; percent under 19, 20 - 25, 26 - 44, 45 - 61, and 62+; and percent male and female.

A practical application of these data is to determine whether the characteristics of students residing in a service area are representative of the service area population as a whole.

Other student characteristics are listed by individual census tracts within each service area in Volume II. These data can be useful in studying the mobility patterns of students. For example, using these data it is possible to identify regions in the District in which students travel great distances to attend class. These data can also be used in conjunction with population data to determine the percentage of the population in a given census tract that is attending community college. The identification of low draw areas can assist the college in targeting areas for future recruitment.

COLLEGE SERVICE AREA

MAPS

11

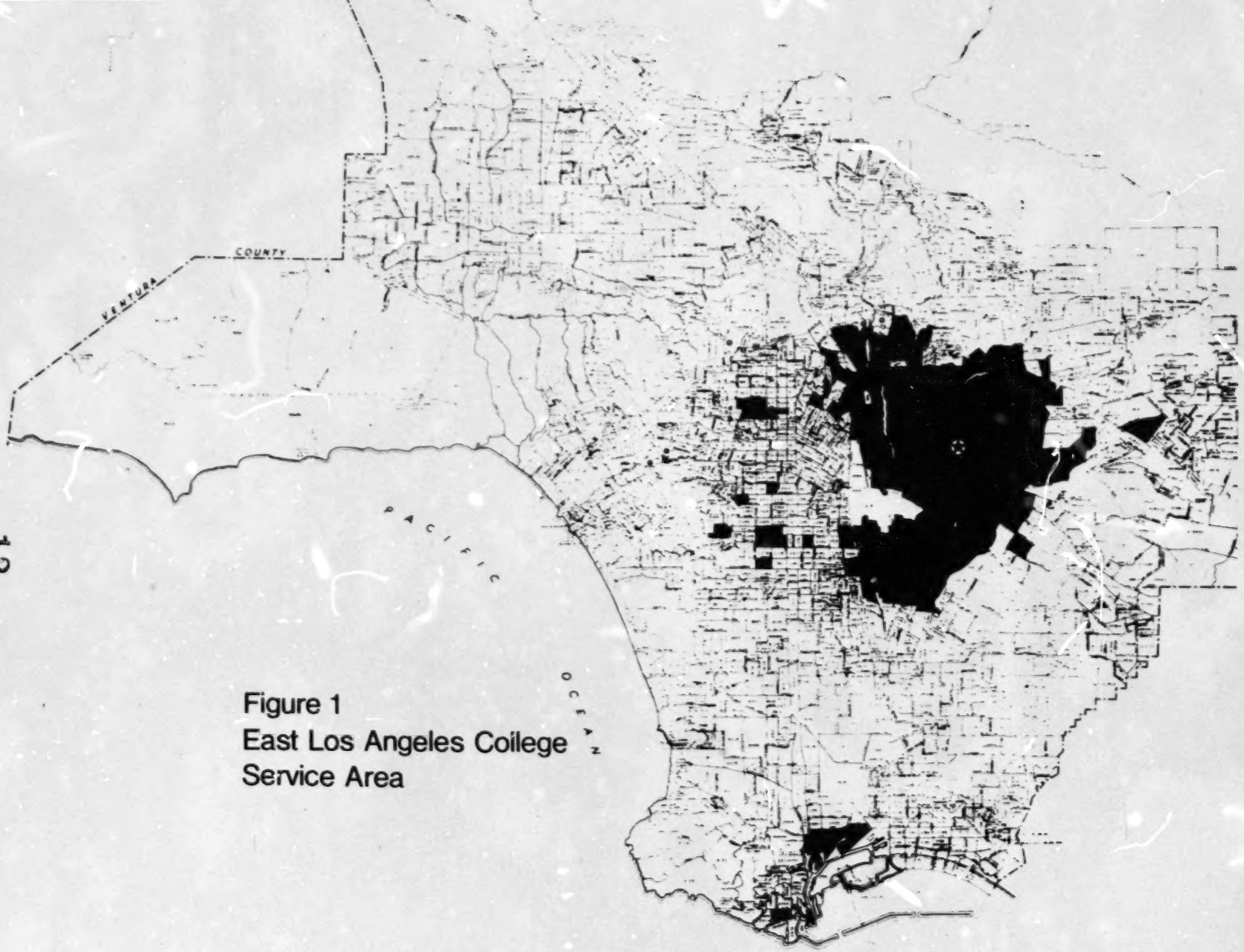


Figure 1
East Los Angeles College
Service Area

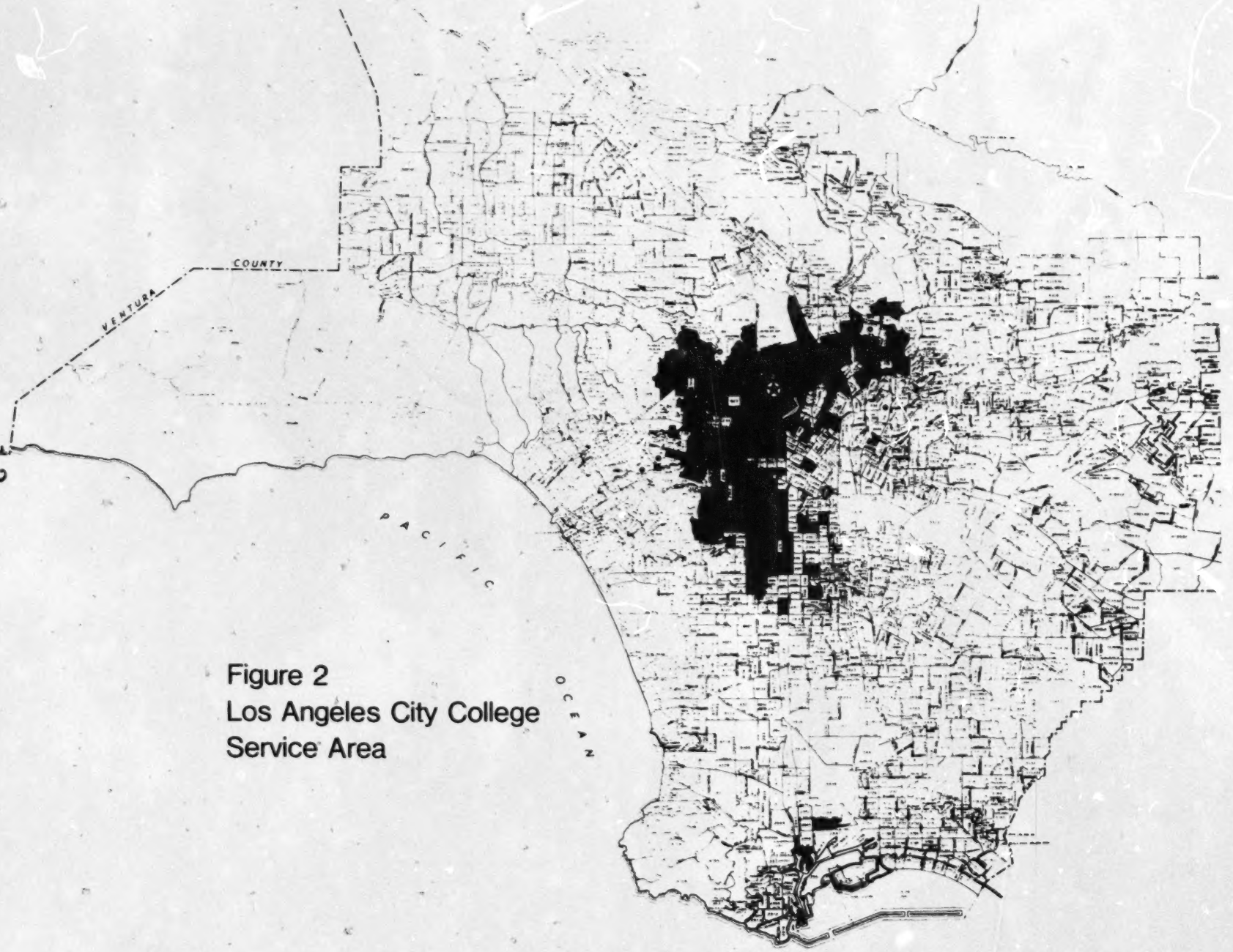


Figure 2
Los Angeles City College
Service Area

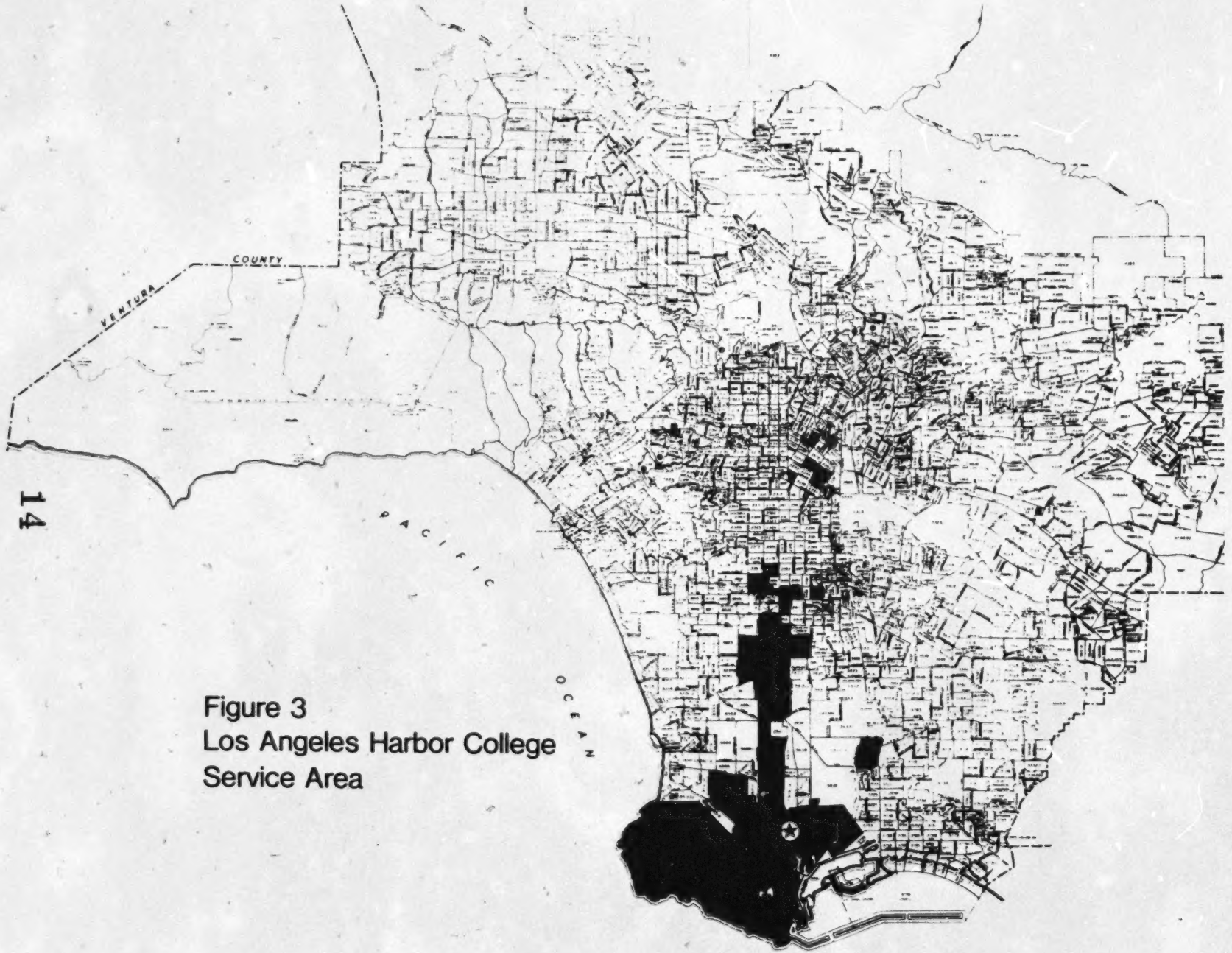


Figure 3
Los Angeles Harbor College
Service Area

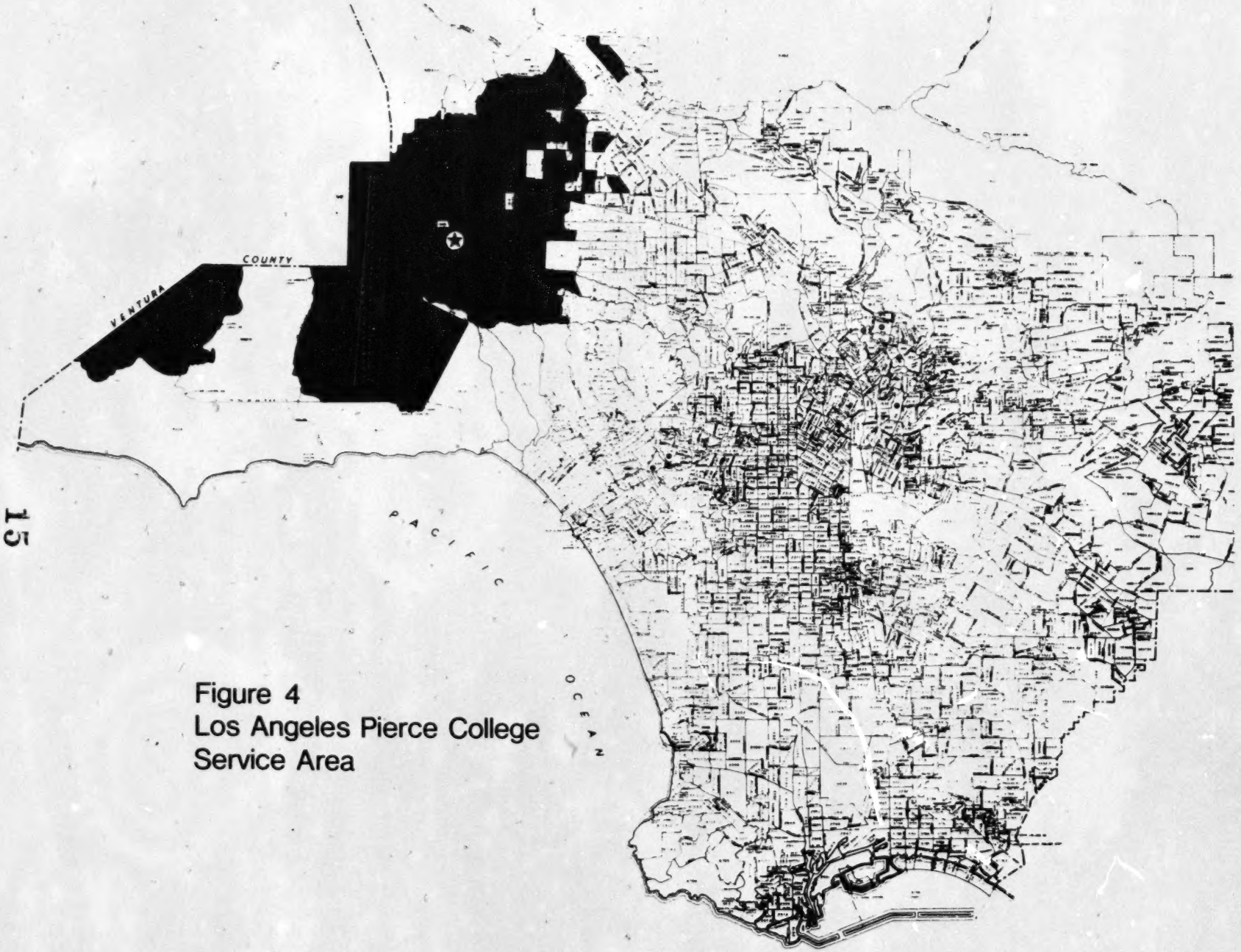


Figure 4
Los Angeles Pierce College
Service Area

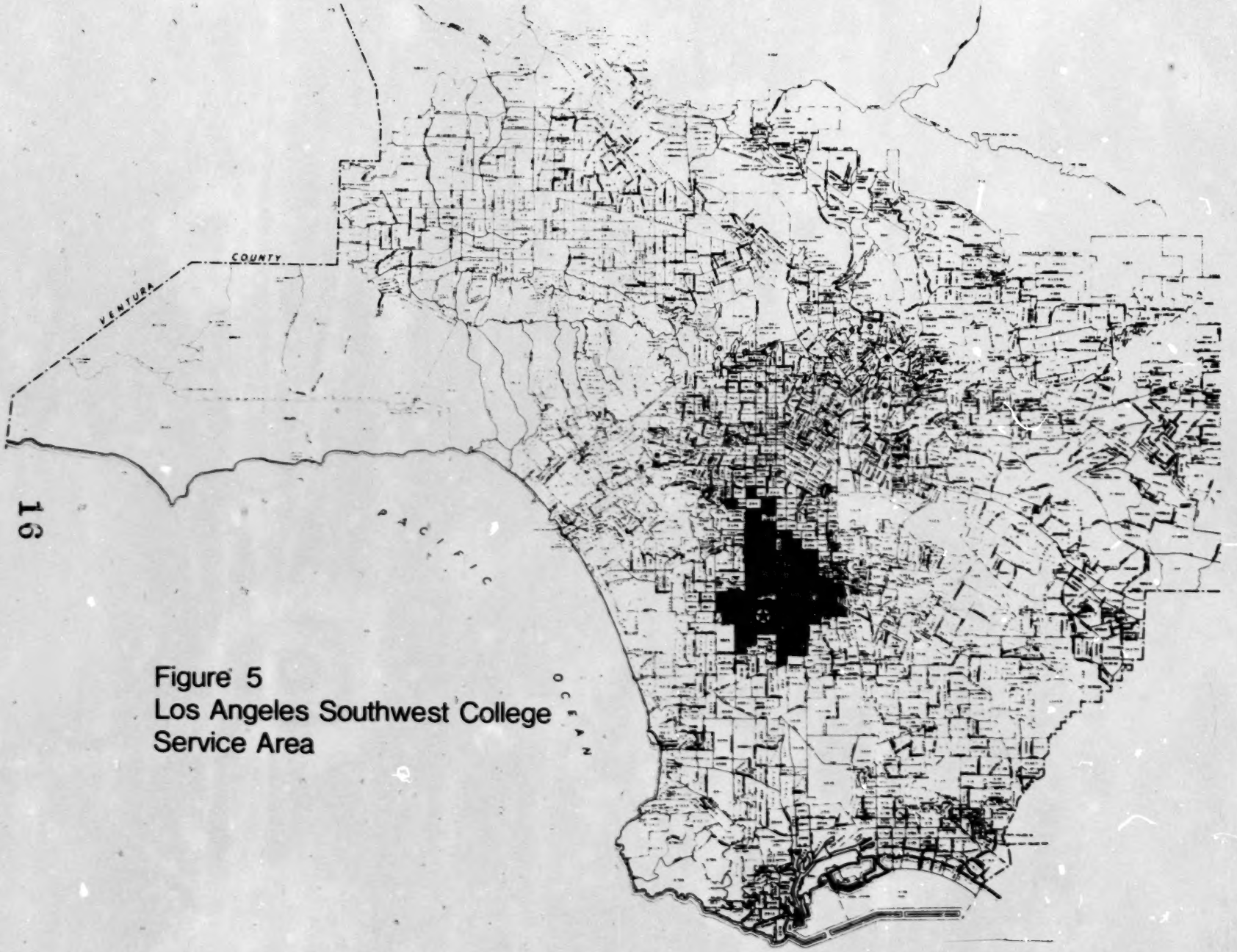


Figure 5
Los Angeles Southwest College
Service Area

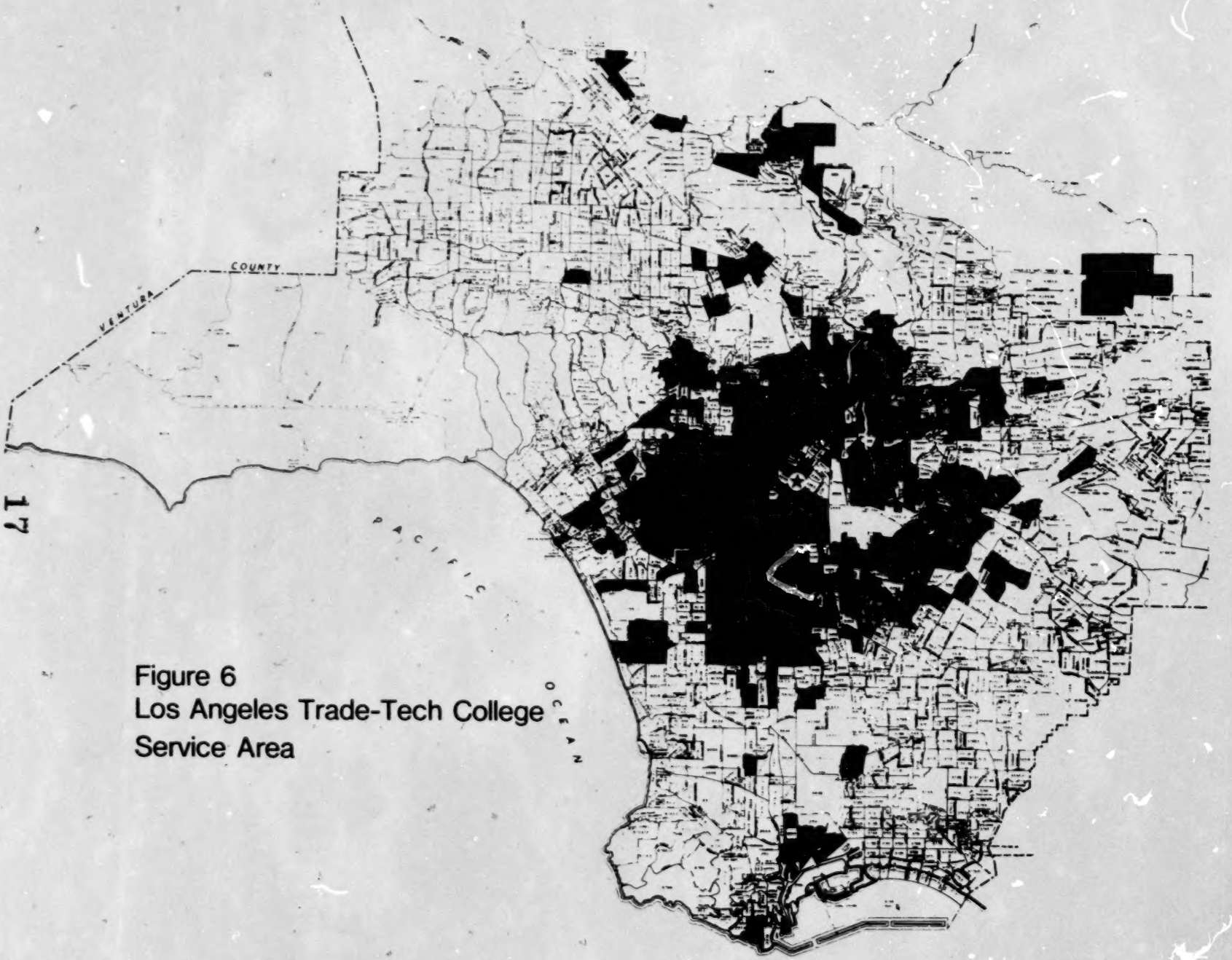


Figure 6
Los Angeles Trade-Tech College
Service Area

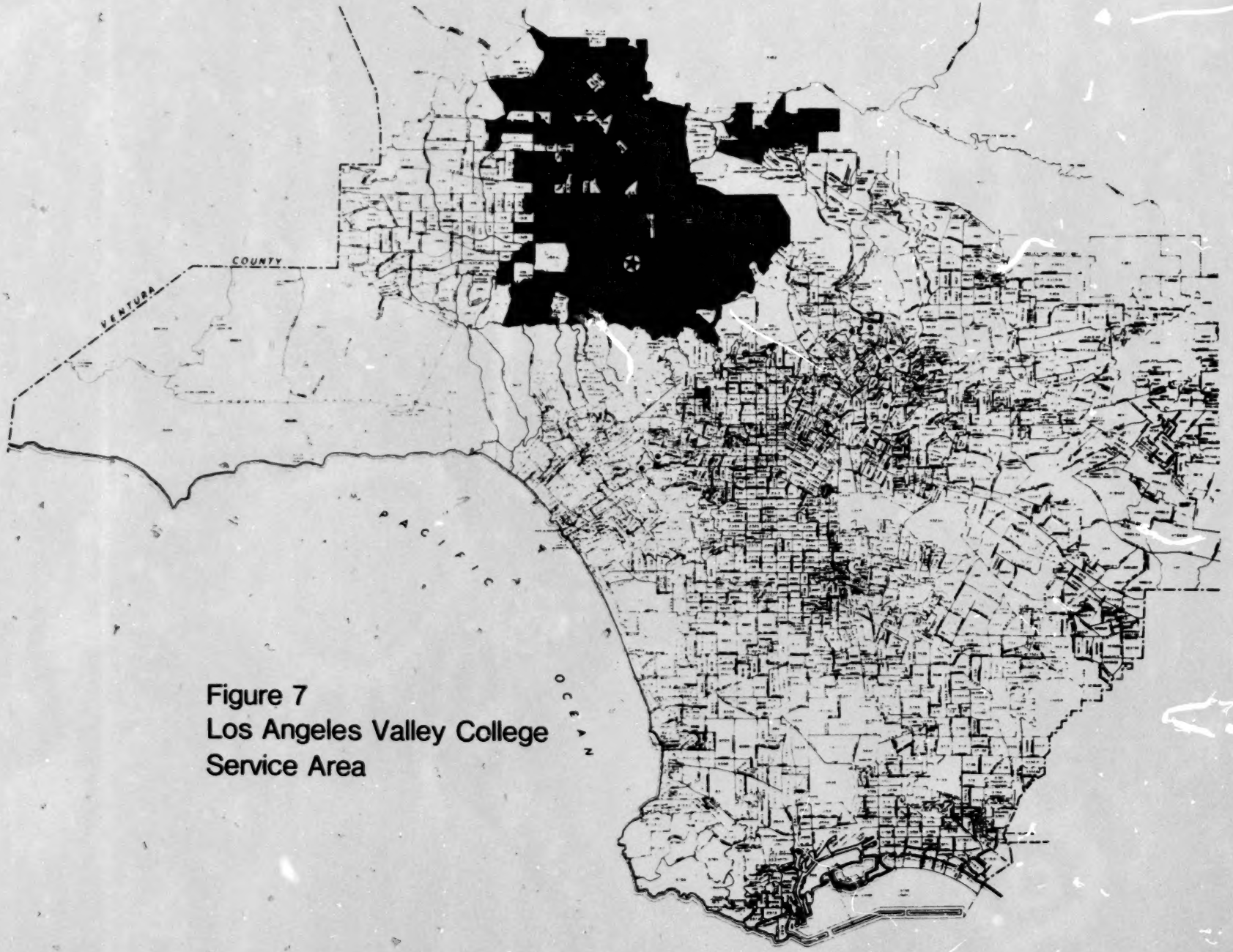


Figure 7
Los Angeles Valley College
Service Area

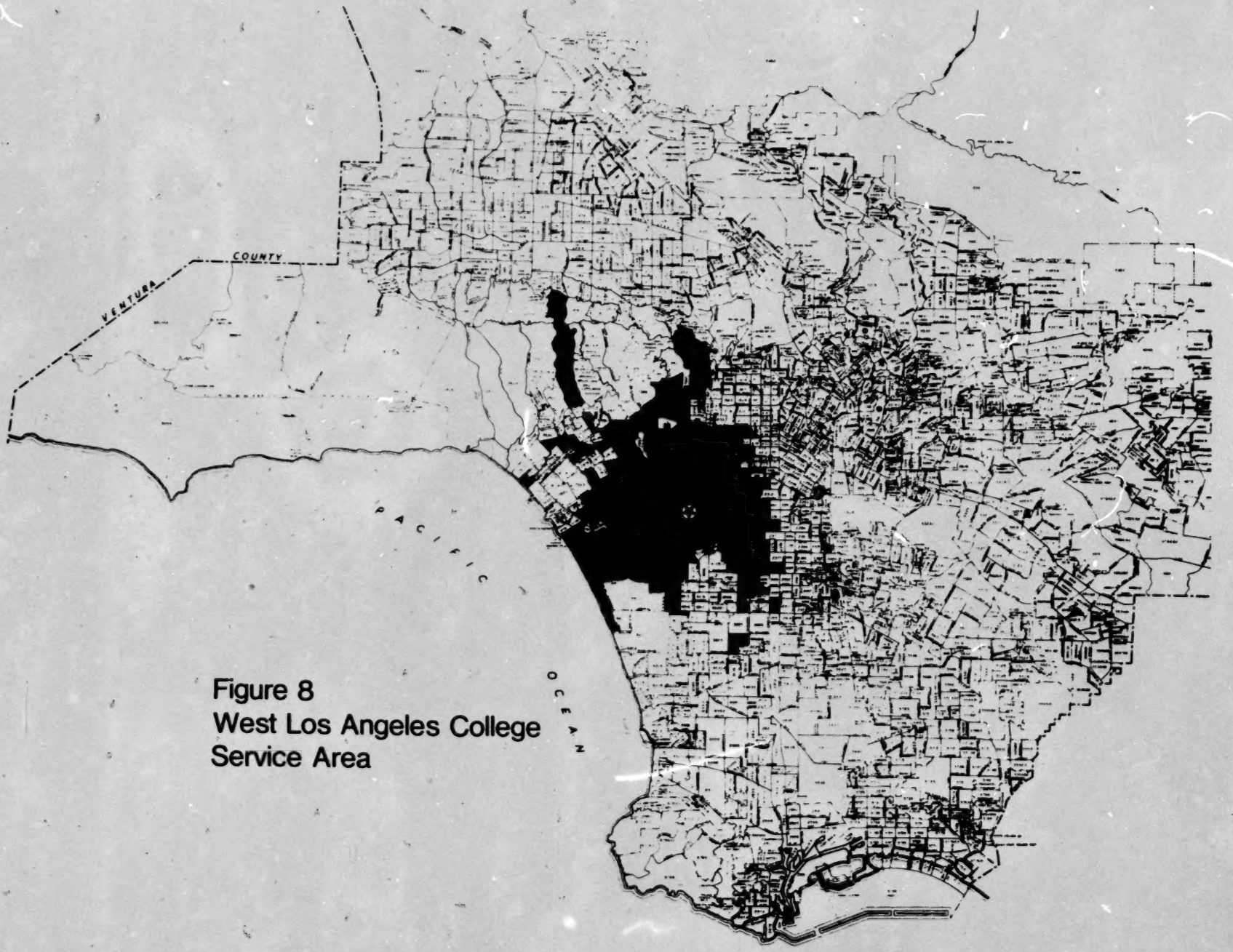


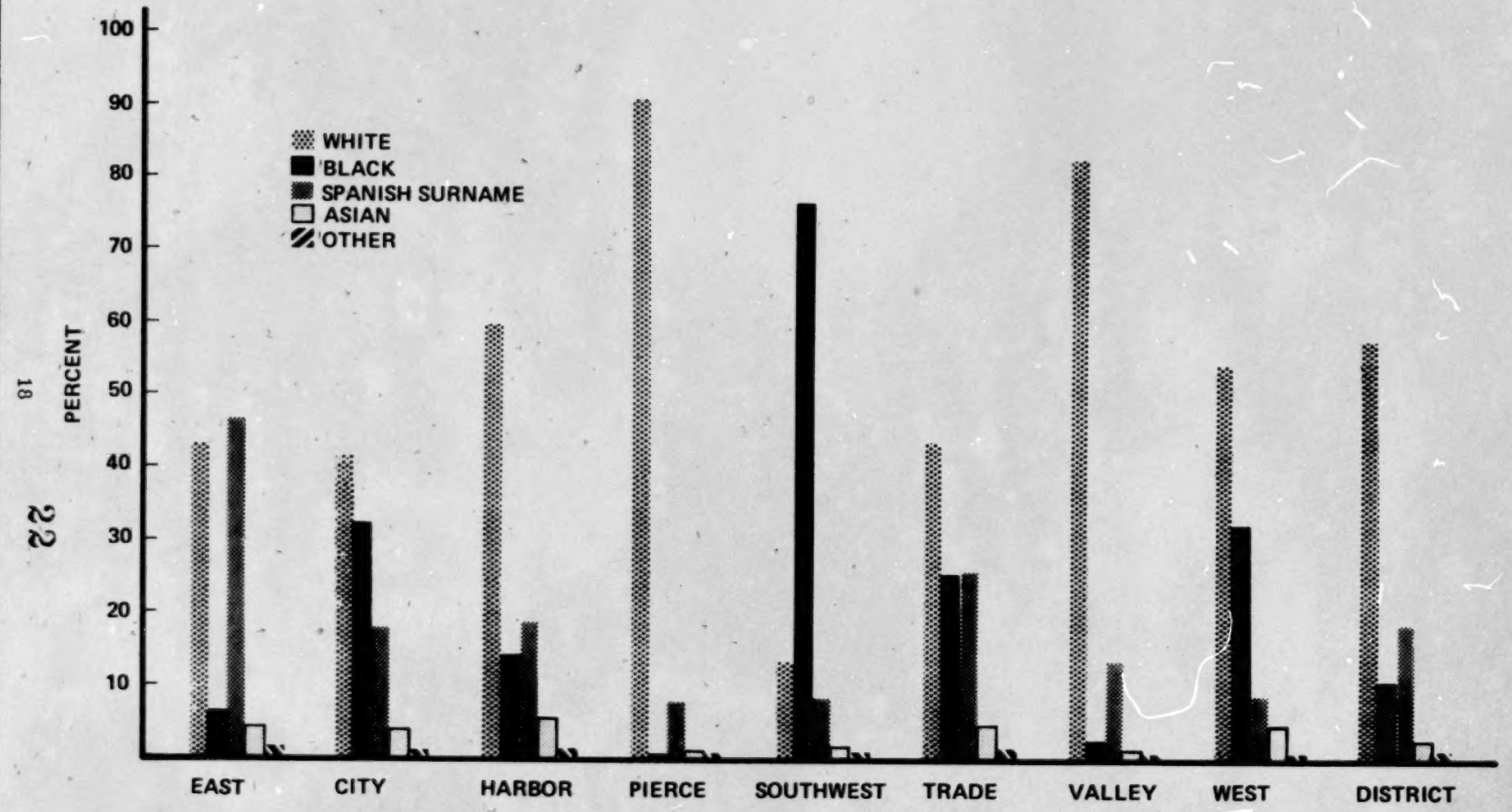
Figure 8
West Los Angeles College
Service Area

COLLEGE SERVICE AREA

POPULATION CHARACTERISTICS

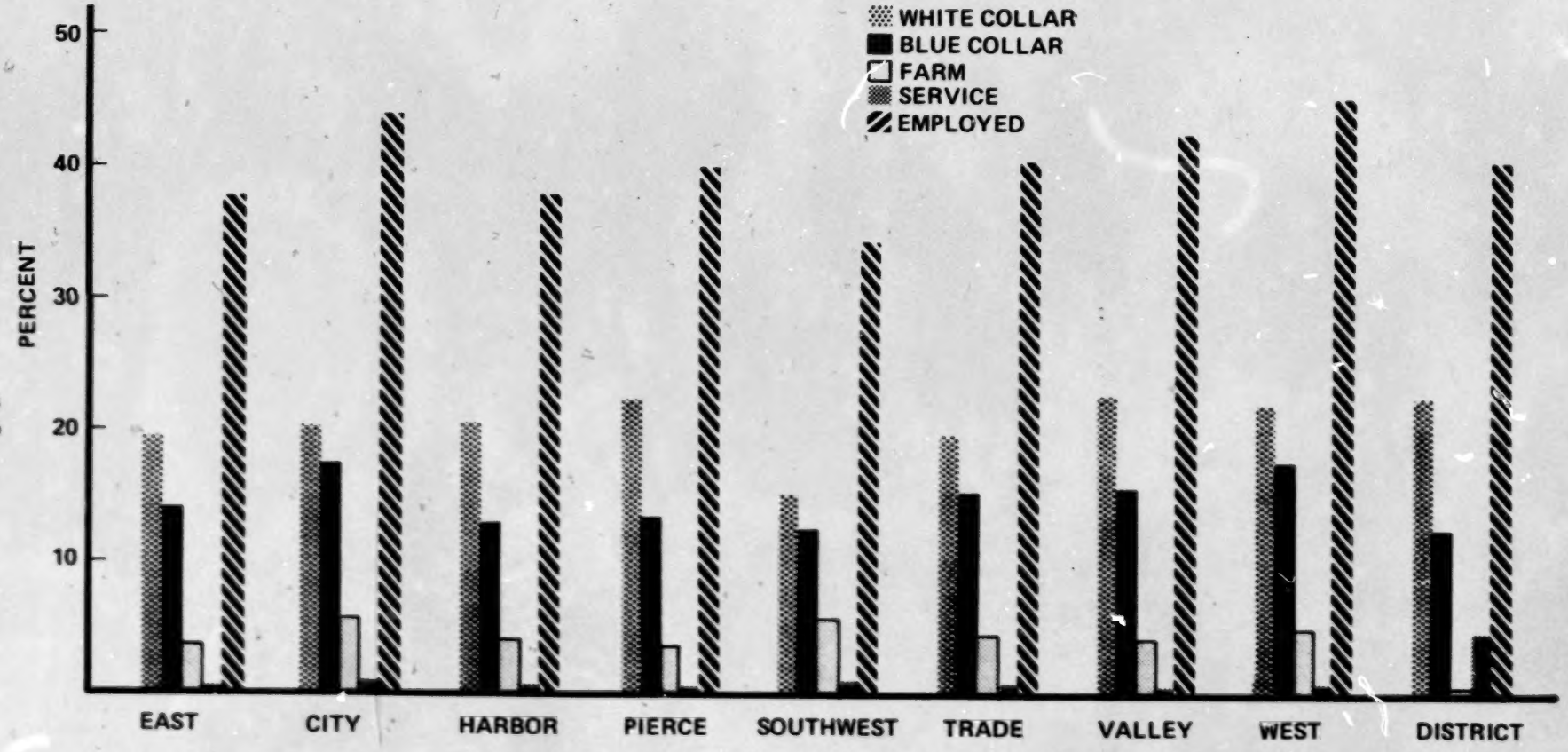
Table 1
College Service Area Population Characteristics

	East	City	Harbor	Pierce	Southwest	Trade	Valley	West	District
Percent White	43.1	41.8	59.5	90.8	13.0	43.7	82.3	54.1	67.0
Percent Black	5.2	32.4	14.2	.3	76.3	25.2	2.4	32.0	10.9
Percent Spanish	46.2	17.8	18.6	7.6	8.2	25.4	13.5	8.5	18.4
Percent Asian	4.0	6.7	6.5	.9	1.7	4.5	1.1	4.6	2.7
Percent Other	1.5	1.3	1.2	.4	.8	1.2	.7	.8	1.0
Percent White Collar	19.6	20.2	20.4	22.3	15.2	19.7	22.8	22.0	22.7
Percent Blue Collar	14.1	17.4	13.0	13.6	12.5	15.3	15.5	17.5	12.8
Percent Farm	3.7	5.5	4.1	3.6	5.8	4.8	4.0	5.0	.1
Percent Service	.4	.9	.5	.4	1.0	.7	.3	.8	4.8
Percent Employed	37.9	44.0	38.0	39.9	34.5	40.4	42.6	45.3	40.4
Median Age	28	34	29	26	23	30	31	32	30
Median education	11	12	12	13	12	12	12	12	12
Median income	8826	8621	10430	13959	7403	8711	11732	10374	10319



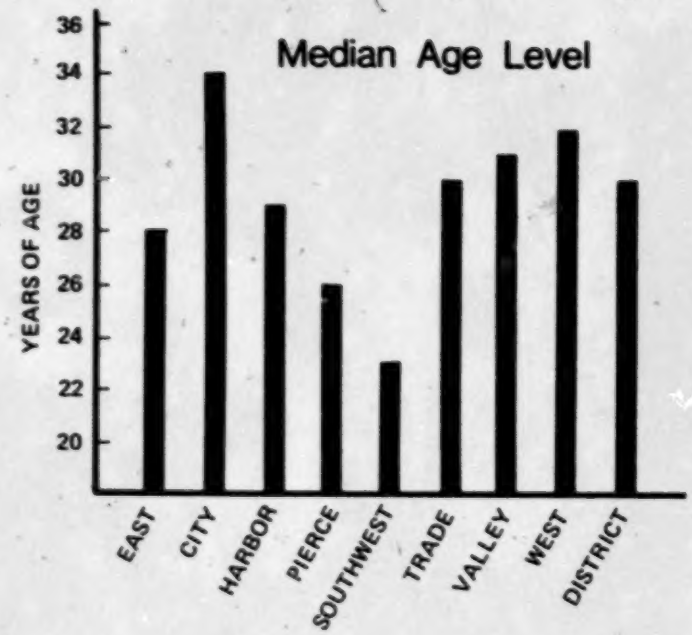
Service Area Population Ethnic Characteristics

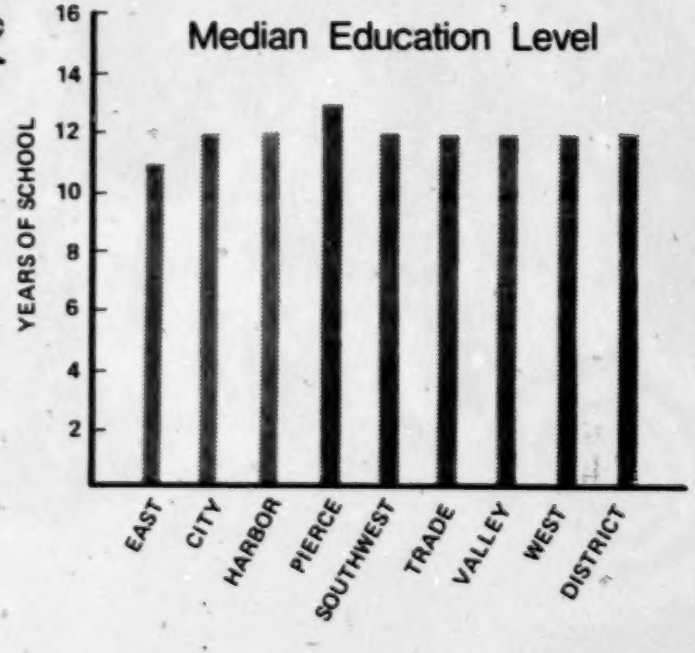
Figure 9



Service Area Population Employment Characteristics

Figure 10


Median Age Level
YEARS OF AGE
36
34
32
30
28
26
24
22
20
EAST
CITY
HARBOR
PIERCE
SOUTHWEST
TRADE
VALLEY
WEST
DISTRICT


Median Education Level
YEARS OF SCHOOL
16
14
12
10
8
6
4
2
EAST
CITY
HARBOR
PIERCE
SOUTHWEST
TRADE
VALLEY
WEST
DISTRICT

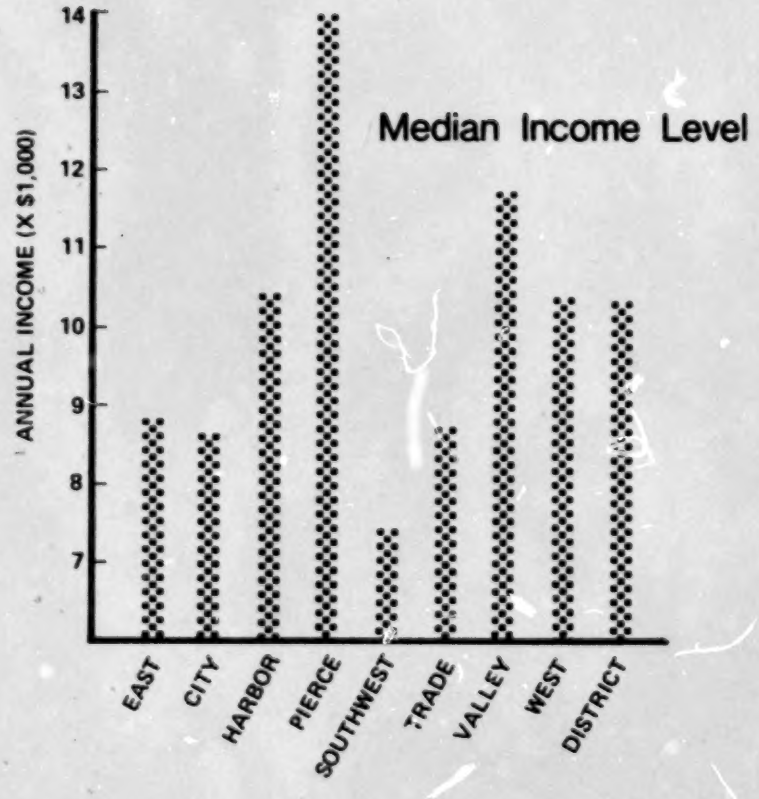

Median Income Level
ANNUAL INCOME (X $1,000)
14
13
12
11
10
9
8
7
EAST
CITY
HARBOR
PIERCE
SOUTHWEST
TRADE
VALLEY
WEST
DISTRICT

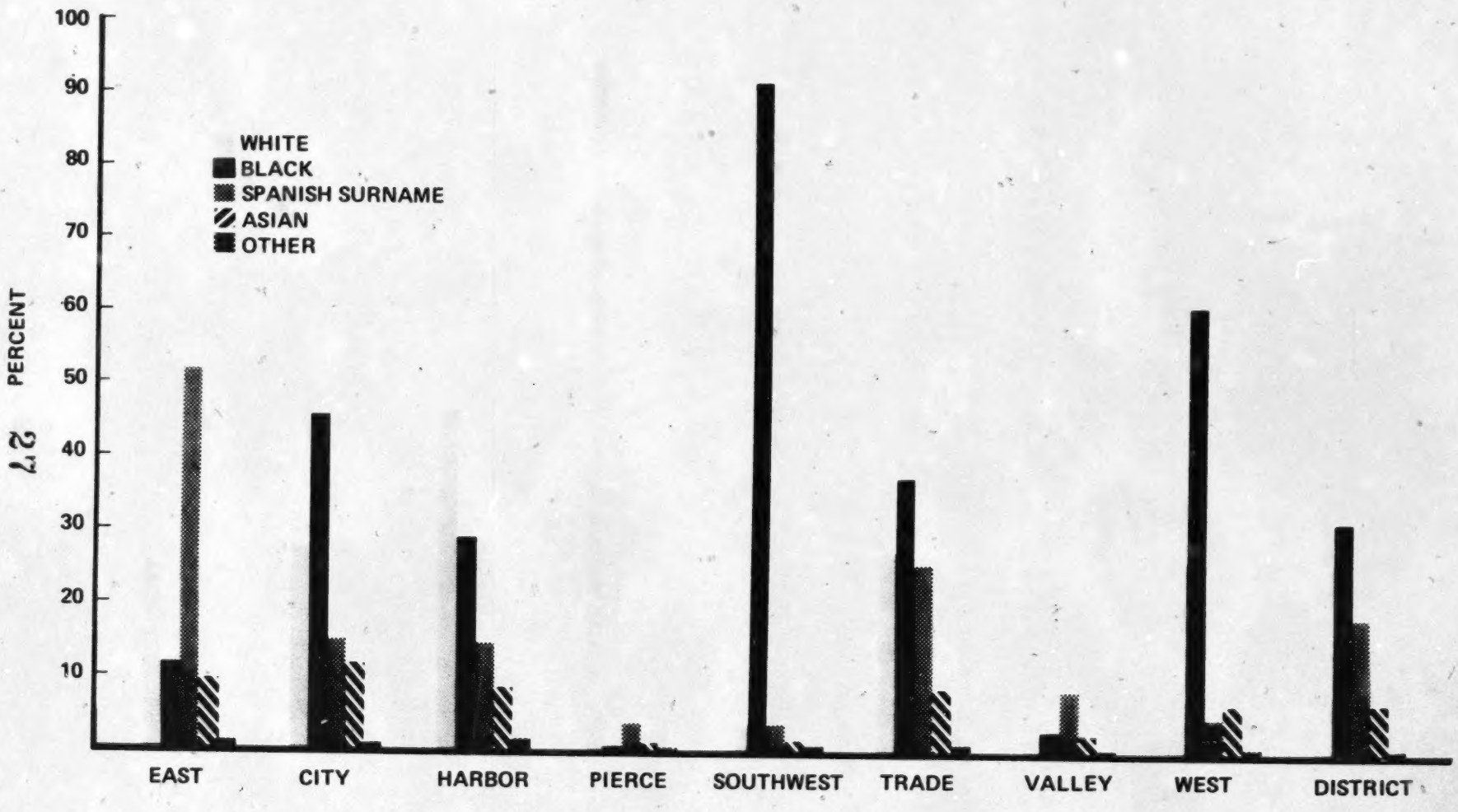
Figure 11

COLLEGE SERVICE AREA

STUDENT CHARACTERISTICS

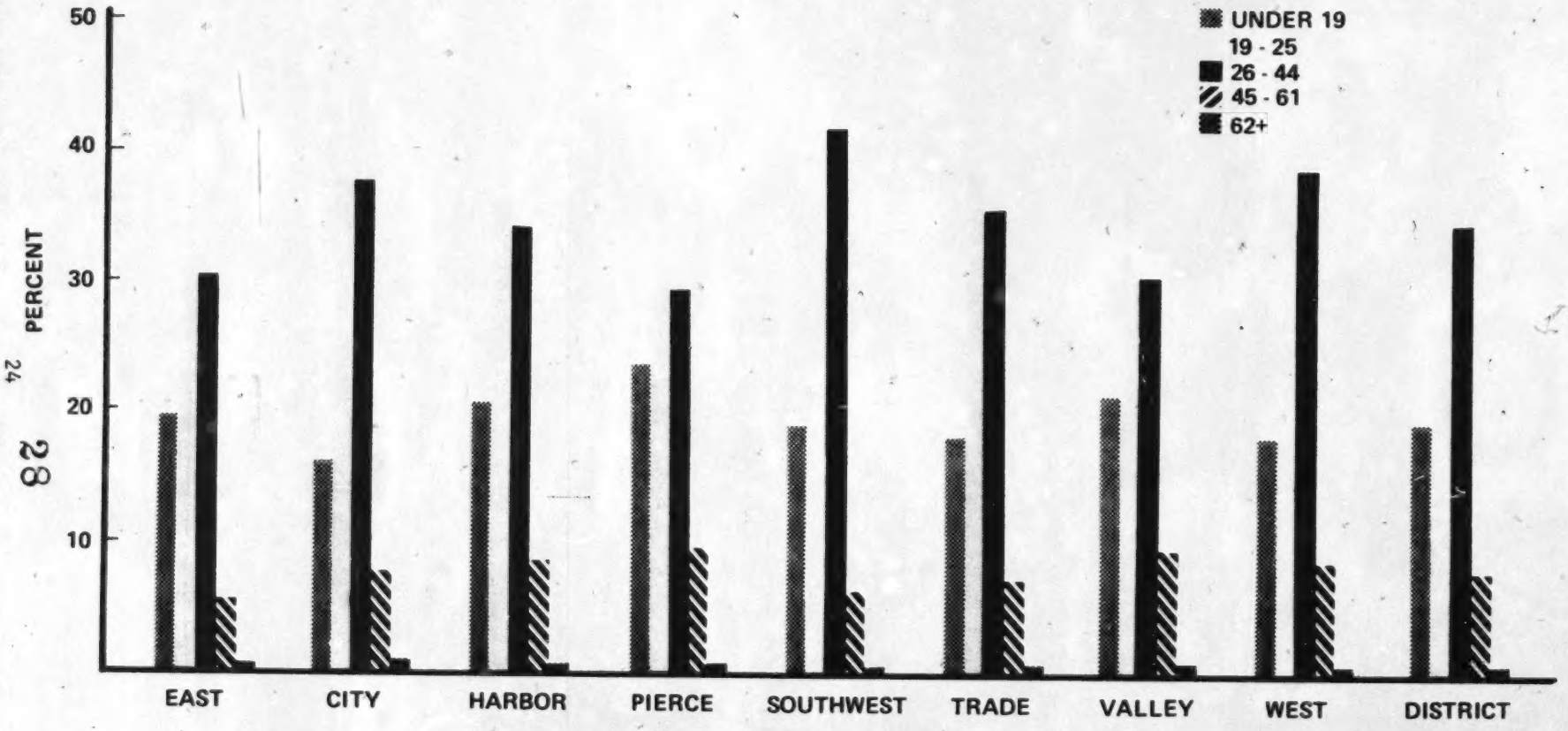
Table 2
College Service Area Student Characteristics

	East	City	Harbor	Pierce	Southwest	Trade	Valley	West	District
Percent White	25.8	27.2	46.3	94.5	3.7	27.3	86.3	26.9	42.3
Percent Black	11.8	45.5	29.0	.6	91.3	37.2	2.9	61.2	31.6
Percent Spanish	51.9	14.9	14.8	3.5	3.2	25.7	8.2	4.7	18.5
Percent Asian	9.5	11.5	8.7	1.0	1.2	8.9	2.1	6.6	6.8
Percent Other	1.0	.9	1.2	.4	.6	.9	.5	.6	.8
Percent Under 19	19.6	16.1	20.5	23.8	19.0	18.0	21.2	18.0	19.1
Percent 20 - 25	44.4	38.0	36.9	36.9	32.8	38.9	38.2	34.1	38.1
Percent 26 - 44	30.1	37.7	34.1	29.3	41.9	35.6	30.3	38.9	34.6
Percent 45 - 61	5.6	7.5	8.5	9.5	6.1	7.0	9.5	8.4	7.7
Percent 62+	.3	.7	.4	.5	.2	.5	.8	.6	.5
Percent Male	56.2	51.7	53.2	53.6	49.7	53.7	52.7	50.2	52.9
Percent Female	43.8	48.3	46.7	46.4	50.3	46.3	47.3	49.8	42.1



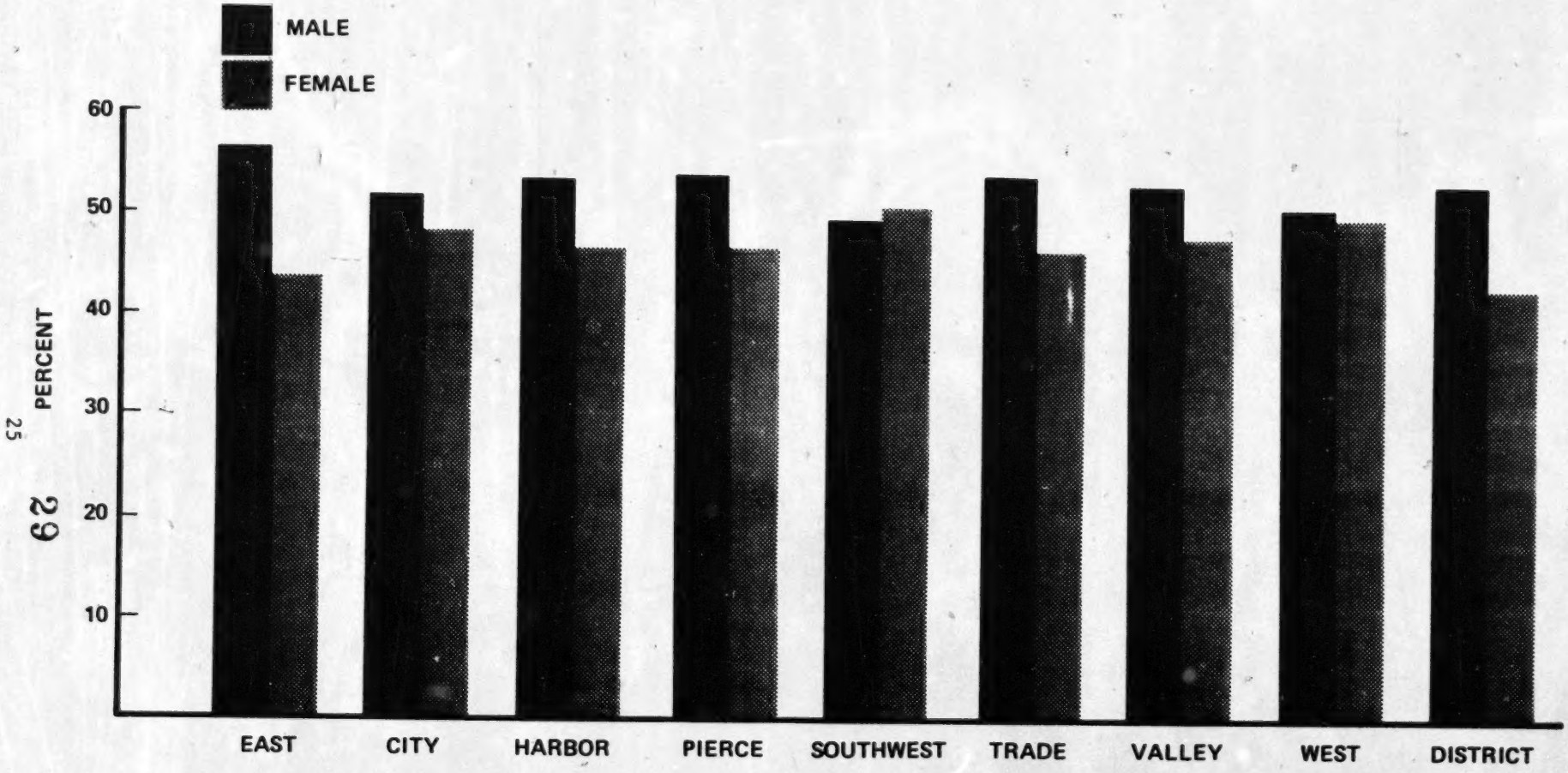
Service Area Student Ethnic Characteristics

Figure 12



Service Area Student Age Characteristics

Figure 13



Service Area Student Sex Characteristics

Figure 14

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